

What is claimed is:

- 5 1. A fuel composition for an internal combustion engine, comprising:
(A) a major amount of a fatty carboxylic acid ester composition from the transesterification of at least one naturally occurring triglyceride; and
(B) a minor amount of a low temperature operability composition comprising an esterified copolymer of an alpha-olefin or styrene and an alpha, beta-unsaturated
10 monocarboxylic or dicarboxylic acid or anhydride, wherein the copolymer of (B) is esterified with a mixture of two or more alcohols having 5 to 28 carbon atoms wherein the mixture of the two or more alcohols has an average carbon length of 9.2 to 11.8 on a weight % basis.
- 15 2. The fuel composition of claim 1 wherein the naturally occurring triglyceride is a vegetable oil.
3. The fuel composition of claim 2 wherein the vegetable oil is a rapeseed oil, a soybean oil, a palm oil, or a mixture thereof.
- 20 4. The fuel composition of claim 1 wherein the naturally occurring triglyceride is transesterified with at least one monohydric alcohol having 1 to 22 carbon atoms.
5. The fuel composition of claim 3 wherein the rapeseed oil, the soybean oil, the
25 palm oil, or the mixture thereof is transesterified with methanol.
6. The fuel composition of claim 1 wherein the alpha, beta-unsaturated monocarboxylic or dicarboxylic acid or anhydride is maleic acid, maleic anhydride, fumaric acid, itaconic acid, itaconic anhydride, acrylic acid, or methacrylic acid.
- 30 7. The fuel composition of claim 6 wherein the copolymer of (B) is formed from styrene and maleic anhydride.

8. The fuel composition of claim 7 wherein the copolymer of (B) prior to esterification has a reduced specific viscosity of 0.05 to 2.

5 9. The fuel composition of claim 1 wherein the copolymer of (B) further comprises an additional comonomer selected from the group consisting of a C₁₋₄ alkyl alpha, beta-unsaturated monocarboxylic acid ester, a di(C₁₋₄ alkyl) alpha, beta-unsaturated dicarboxylic acid ester, a vinyl monocarboxylic acid ester, an alkyl vinyl ether, and a mixture thereof.

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10. The fuel composition of claim 9 wherein the additional comonomer is methyl methacrylate.

11. The fuel composition of claim 1 wherein the copolymer of (B) is esterified with a
15 mixture of two or more alcohols having 5 to 20 carbon atoms.

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12. The fuel composition of claim 1 wherein the esterified copolymer of (B) is further reacted with an amine having only one amino group that is a primary or a secondary amino group.

13. The fuel composition of claim 1 wherein the ester composition (A) is present in the fuel composition from 30 to 99.99% by weight and the low temperature operability composition (B) is present in the fuel composition from 100 to 10,000 ppm by weight.

25 14. The fuel composition of claim 1, further comprising:
(C) at least one additional fuel additive.

15. The fuel composition of claim 1, further comprising:
(D) a normally liquid fuel.

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16. The fuel composition of claim 15 wherein the normally liquid fuel is a diesel fuel.

17. A method for improving the low temperature operability of a fuel composition, comprising:

admixing the ester composition (A) with a low temperature improving amount of the composition (B) of claim 1.